PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference GB020038	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/GB 03/03032	International filing date *(day/month/year)* 11.07.2003	Priority date *(day/month/year)* 24.07.2002

International Patent Classification (IPC) or both national classification and IPC
G06F9/00

Applicant
INTERNATIONAL BUSINESS MACHINES CORPORATION

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 2 sheets.

3. This report contains indications relating to the following items:

I	☒	Basis of the opinion
II	☐	Priority
III	☐	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
IV	☐	Lack of unity of invention
V	☒	Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
VI	☐	Certain documents cited
VII	☐	Certain defects in the international application
VIII	☐	Certain observations on the international application

Date of submission of the demand 22.08.2003	Date of completion of this report 29.10.2004
Name and mailing address of the International preliminary examining authority: European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Dewyn, T Telephone No. +31 70 340-2145

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)):*

Description, Pages

1-11   as originally filed

Claims, Numbers

1-6   received on 24.09.2004 with letter of 21.09.2004

Drawings, Sheets

1/2-2/2   as originally filed

2. With regard to the **language,** all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language: , which is:

   ☐   the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐   the language of publication of the international application (under Rule 48.3(b)).

   ☐   the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐   contained in the international application in written form.

   ☐   filed together with the international application in computer readable form.

   ☐   furnished subsequently to this Authority in written form.

   ☐   furnished subsequently to this Authority in computer readable form.

   ☐   The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐   The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐   the description,   pages:

   ☐   the claims,   Nos.:

   ☐   the drawings,   sheets:

5. ☐   This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

   (Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-6
	No:	Claims	
Inventive step (IS)	Yes:	Claims	
	No:	Claims	1-6
Industrial applicability (IA)	Yes:	Claims	1-6
	No:	Claims	

2. Citations and explanations

   see separate sheet

1.   Reference is made to the following documents:

D1:   US2002/0062356 (Clarke ET AL)

D2 : Dave Tang, Gadzoox Microsystems, "Storage Area Networking, The Network Behind the Server"

2.   The present application does not meet the requirements of Article 33(1) PCT, because the subject-matter of claims 1-6 does not involve an inventive step in the sense of Article 33(3) PCT.

2.1   Document D1 (page 2, right column, paragraph [0030] - page 3, left column, paragraph [0039]) discloses the following subject-matter of claim1 :

An asynchronous messaging-and-queuing system, where queue managers, belonging to a queue-sharing group, can control a message queue on behalf of one or more other queue managers belonging to that group. Said system comprising means for controlling persistence of the messages (page 4, left column, paragraph [0052]), and comprising transactional control means (page 4, right column, paragraph [0059]).

The disclosure of D1 (page 2, paragraph [0030]), explaining a system with a shared message queue, and with queue managers coupled together, clearly expresses the idea of a centralised mechanism of queue control.

The subject-matter of claim 1 differs from D1 in that in claim1, a storage area network controller performs the control over the message queues, thereby providing distributed storage in a dedicated (storage area) network, which is not the case in the system disclosed in D1, where the storage is performed in single databases ("data repository", see page 2, right column, paragraph [0031], and "coupling facility", see page 3, left column, paragraph [0039]).

The problem to be solved by the present invention may therefore be regarded as : how to implement highly available and fault tolerant storage for the shared message queues of the system disclosed in D1.

The concept of Storage Area Networks, which is well-known to the skilled person, is meant to provide highly available and fault tolerant storage for shared resources. This is for example disclosed in D2 (pages 1,2), which is only mentioned here to illustrate the well-known general concept of a Storage Area Network. It would therefore be an obvious possibility for the skilled person to store the shared resources of the system disclosed in D1, namely the message queues, on a Storage Area Network, in order to solve the problem posed.

As a consequence, claim 1 is not allowable under Article 33(3) PCT for lack of inventive step of its subject-matter.

For the same reasons, corresponding method claim 4 and program claim 6 are not allowable under Article 33(3) PCT for lack of inventive step of their subject-matter.

2.3   The subject-matter of dependent claims 2,5 does not involve an inventive step, since it is commonly known that in Storage Area Networks, as well as in Local Area Networks, heterogeneous platforms can be integrated.

2.6   The subject-matter of dependent claim 3 does not involve an inventive step, since the use of syncpoints is commonly known, and is for example disclosed in D1 (page 4, left column, paragraph [0059]), where the use of syncpoints "MQGET" and "MQPUT" is explained.